

Amended
A1 variable speed drive which controls the motor by changing the frequency of the electric power being supplied to the motor by the variable speed drive.

Amend the paragraph at page 1, lines 9-21 as follows:

A2
The cost of a variable speed drive is on the order of that of a compressor. So, adding a variable speed drive to a conventional compressor greatly increases the cost and adds a degree of redundancy since the unloader valve, or other mechanical unloading structure, has some functional overlap with the variable speed drive in that both can control compressor capacity. While the variable speed drive is external to the compressor, an unloader valve is internal to the compressor. Being internal to the compressor, the unloader valve requires additional manufacturing steps to accommodate it in the compressor. Specifically, the unloader valve is located in a cusp and effectively forms a portion of the bores. This requires precision machining to achieve the requisite sealing with the rotors and introduces a leakage path along the interface of the unloader valve with the rotor bores. Other types of mechanical unloaders such as poppets also require additional manufacturing steps in order to be accommodated in a compressor.

Amend the paragraph at page 5 lines 11-27 as follows:

A3
While refrigeration system 10, as described above, has many features common with conventional refrigeration systems, there are a number of significant differences. Screw compressor 12 is simpler than conventional refrigeration compressors in that it has no mechanical unloading structure. Accordingly, the rotors only seal with each other and the bores. There is no slide valve which replaces portions of the bores in the region of a cusp with the attendant extra manufacturing costs and potential for leakage between the slide valve and adjacent structure or any other mechanical unloading structure. The output of compressor 12 is controlled through motor 11 whose speed is controlled by variable speed drive 40. The motor 11 is matched to the variable speed drive 40 and compressor 12. There is an ideal compressor speed for the design compressor output.